



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/672,962 | 09/26/2003 | Jiro Yamada | 09792909-5692 | 3592 |

26263 7590 09/21/2005

SONNENSCHN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

| |
|----------|
| EXAMINER |
|----------|

GUHARAY, KARABI

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2879

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/672,962 | Applicant(s) YAMADA ET AL. | |
| | Examiner Karabi Guharay | Art Unit 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Oath/Declaration

Oath/Declaration, filed on 3/8/2004 has been considered and entered. However, the priority for foreign document mentioned in Oath/declaration is not claimed here, which contradicts the preliminary amendment filed on 9/26/03. Appropriate correction is required.

Priority

Receipt is acknowledged of a certified copy of the foreign document JP 2002-292082, mentioned in Preliminary amendment, filed on 9/26/2003.

Claim Objections

Claims 1, 2, 3, 4, 5 are objected to for the following reasons:

(1) The claims are objected to because they include essential subject matter enclosed within parentheses. While reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses, so as to avoid confusion with other numbers or characters which may appear in the claims, essential subject matter should not be enclosed within parentheses since references enclosed within parentheses do not constitute a limitation. See MPEP § 608.01(m).

(2) Claims 1-5 are not presented as a single sentence.

Each claim should begin with a capital letter and end with **a period**. Periods may not be used elsewhere in the claims except for abbreviations. See *Fressola v. Manbeck*, 36 USPQ2d 1211 (D.D.C. 1995). MPEP 608.01(m).

Appropriate corrections are required.

Further claims 2-5 are objected for being inconsistent with the specification. In these claims recited mathematical formula numbers are inconsistent with the mathematical formula numbers cited in specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu et al. (US 6326224).

Regarding claims 1 & 4, Xu et al. discloses a light emitting display unit (30 of Fig 2) comprising a light emitting layer (36, 37) between a first electrode (35) and second electrode (38), a resonator structure (32, 34, lines 40-55 of column 3) resonating light generated in the light-emitting layer between a first end portion and a second end portion (see Fig 2) , wherein an optical distance L1 between the first end portion and a maximum light-emitting position of the light-emitting layer (41) satisfies

Mathematical Formula 1,

$$L_1 = tL_1 + a_1$$

$$(2tL_1)/\lambda = -\Phi/(2\pi) + m_1,$$

where tL_1 represents a theoretical optical distance between the first end portion and the maximum light-emitting position, a_1 represents a correction amount based upon

Art Unit: 2879

a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light desired to be extracted, Φ represents a phase shift of reflected light generated in the first end portion, and m_1 is 0 or an integer, though it is not explicitly mentioned, first equation of the mathematical formula 1 is satisfied since effective optical distance L_1 will always be sum of theoretical optical distance and the correction term, further since micro-cavity 32 resonates it will satisfy the second equation in mathematical formula 1, further Xu et al. discloses an optical distance L_2 between the second end portion and the maximum light-emitting layer (see Fig 2) satisfy Mathematical Formula 2

$$L_2 = tL_2 + a_2$$

$$(2tL_2)/\lambda = -\Phi/(2\pi) + m_2,$$

where tL_2 represents a theoretical optical distance between the second end portion and the maximum light-emitting position, a_2 represents a correction amount based upon a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light desired to be extracted, Φ represents a phase shift of reflected light generated in the second end portion, and m_2 is 0 or an integer, similarly, though it is not explicitly mentioned, first equation of the mathematical formula 2 is satisfied since effective optical distance L_2 will always be sum of theoretical optical distance and correction, further since micro-cavity 34 resonates it will satisfy the second equation in mathematical formula 2, further Xu et al. discloses that in case of both micro-cavity (32, 34) wave length λ of the resonant structure is same (lines 26-36 of column 2).

Art Unit: 2879

Regarding claims 3 & 6, Xu et al. disclose that the light emitting layer is an organic layer (see abstract).

Allowable Subject Matter

Claims 2 & 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2 & 5, the prior art of record neither shows nor suggest a display device comprising the limitations of claims 2 & 5, together with other cited limitations.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure : Yamada (US 2005/0099113); Iwase et al. (US 2003/0173897); Nishimura et al. (US 2004/0160154) ; Xu et al. (US 5949187) .

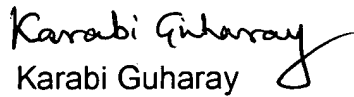
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karabi Guharay
Primary Examiner
Art Unit 2879